UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/944,341	09/04/2001	Tsuneo Sato	0649-0799P	9771

2292 7590 09/08/2005

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER	
GOOD JOHNSON, MOTILEWA	
ART UNIT	PAPER NUMBER
2677	

DATE MAILED: 09/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/944,341	SATO ET AL.	
	Examiner	Art Unit	
	Motilewa A. Good-Johnson	2677	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 April 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *9-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *9-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 4-7-05
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 9-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Henderson, U.S. Patent Number 6,011,595, "Method for Segmenting a Digital Image into a Foreground Region and Key Color Region", class 348/590, 01/04/2000, filed 09/19/1997 in view of Edge et al., U.S. Patent Number 6,362,808 B1, "Arrangement for Mapping Color Between Imaging Systems and Method Therefor", class 345/601, 03/26/2002, filed 08/12/1997.

Regarding claim 9, Henderson discloses a color management apparatus for converting supplied image data by using a lookup table of color characteristic data into output image data, said color management apparatus comprising: a lookup table which is composed of characteristic points which are points indicating the relationship between supplied image data and output image data which are determined to be impossible to be interpolated when a process for converting image data is performed (col. 6, lines 1-28, look-up table stores indicators of color values inside a key color volume and outside the key color volume, which Examiner interprets as color impossible to be interpolated)

However it is noted that Henderson fails to disclose and image data converting means for converting supplied image data by using said lookup table composed of the characteristic points into output image data.

Edge discloses image data converting means for converting supplied image data by using said lookup table composed of the characteristic points into output image data. (col. 5, lines 26-32)

It would have been obvious to one of ordinary skill in the art at the time of the invention to include data impossible to be interpolated in a look up table, to reproduce images representative of color values outside a key region of a color management area that are impossible to be interpolated.

Regarding claim 10, Henderson discloses table developing means for developing said lookup table into multidimensional lookup table; wherein said image data converting means uses the multidimensional lookup table developed by said table development means . . . (col. 6, lines 41-65)

Regarding claim 11, Henderson discloses table development means develops said lookup table into said multidimensional lookup table in such a manner that all of characteristic points of said lookup table composed of the characteristic points are contained. (figure 6, element 60)

Regarding claim 12, Henderson discloses table development means develops said lookup table into the multidimensional lookup table such that data corresponding to grid points of said multidimensional lookup table is composed of output data of said

lookup table and data of information of adjacent grid points for interpolating a portion between grid points. (figure 4)

Regarding claim 13, Henderson discloses multidimensional lookup table is a compressed . . . table formed by compressing said multidimensional lookup table; restoring means is provided which restore said compressed multidimensional lookup table into said multidimensional lookup table; said image data converting means causes said restoring means to restore said compressed multidimensional lookup table and uses obtained . . . table to convert supplied image data into output image data. (col. 6, lines 16-19)

Regarding claim 14, Henderson discloses table recording means for recording said multidimensional lookup table . . . in a memory; and updating means for operating said table development means and said table recording means . . . , image data converting means uses said . . . table recorded in said memory to convert supplied image data into output image data. (figure 3, element 34, address multi dimensional look up table with pixel color values, which Examiner interprets as table recording)

Regarding claim 15, it is rejected based upon similar rational as claim 9. Further, Edge discloses a color management system, col. 4, lines 1-7 and further discloses a lookup table to enable interpolation of destination coordinates form source coordinates, col. 7, lines 35-57, and storing and constructing the look-up table and using interpolation to convert source coordinates to destination coordinates, col. 7, lines 58-67.

Regarding claim 16, it is rejected based upon similar rational as above claim 9. Further, Edge discloses generating a look-up table and a device link generator including

a device link table builder, col. 7, lines 27-57, a table builder which generates the look-up table by generating a series of source device coordinates as input value entries, col. 7, lines 50-57and transformation techniques supplemented by interpolation between entries in a multidimensional lookup table, col. 1, lines 48-50.

Response to Arguments

3. Applicant's arguments filed 04/07/2005 have been fully considered but they are not persuasive.

Applicant argues that Henderson discloses utilizing interpolation instead of a multi-dimensional look up table to estimate output values, and the values in Henderson are key color volumes utilized to determine colors that are possible to be interpolated. It is the interpretation of the Examiner that the table in Henderson contains values that are possible to be interpolated and the key color values that lie outside the volume are colors that are impossible to be interpolated. Henderson further discloses allowing a use to change the distribution of the key color values to increase the range or the distribution of key color distribution, col. 5, lines 5-48. It is therefore the interpretation of the Examiner that if the user can adjust the key color range that would expand the key color range to include colors which were once outside the range and determined impossible to be interpolated contained within the multi-dimensional lookup table.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Motilewa A. Good-Johnson whose telephone number is (571) 272-7658. The examiner can normally be reached on Monday, Tuesday and Wednesday 9:00 AM - 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Motilewa A. Good-Johnson
Examiner
Art Unit 2677

mgj

SUMATI LEFKOWITZ
SUPERVISORY PATENT EXAMINER